REMARKS

The last Office Action in the above-identified application and the references cited by the Examiner have been carefully considered. The claims have been amended in a sincere effort to define more clearly and more specifically features of Applicant's invention which distinguish over the art of record.

Claims 1-16 have been rejected as being anticipated by U.S. Patent Application Publication No. 2002/0126993 (Sakuramoto, et al.). It appears that the Examiner has cited the same passages from the Sakuramoto, et al. publication that he relied on in his earlier Office Action dated September 11, 2007 in his rejection of the pending claims.

The Sakuramoto, et al. published application teaches a reproducing/reproduction apparatus that reads/writes audio/video data from an optical disk inserted into a drive. The audio/video data read from the optical disk is continuously decoded and output to a display. Concurrently, the physical position of reproduction/recording on the disk is sampled and memorized in one minute intervals into a plurality of memory areas within a last memory. In the event of a power failure, shut down or other error, the user may opt to resume reproduction/recording from the most recent position memorized into the last memory. Upon instruction from the user to continue operation from the last known position, a controller 6 instructs a drive controller 2a to resume memorizing compressed data from the last known position on the disk.

With respect to independent apparatus Claim 1 of Applicant's pending application, the Examiner contends that the Sakuramoto, et al. publication discloses a content recording apparatus comprising a designator, reference data file, data writer, data file, information writer and non-volatile storing area. The Examiner refers to Paragraph [0011] of the Sakuramoto, et al. publication for teaching such components. Applicant's claimed invention includes a designator (hard disk drive 26) for designating a plurality of data files (MPEG files) stored successively on a hard disk 28 based upon reference data within a reference data file (managing file). Independent method Claim 8 has been similarly rejected in view of the Sakuramoto, et al. published application.

Applicant has carefully reviewed Paragraph [0011] of the Sakuramoto, et al. publication and the entire publication in detail, and respectfully urges that the Sakuramoto, et al. publication does not teach or suggest a designator, reference data file or plurality of data files as claimed in Applicant's pending application. Applicant respectfully asserts that Sakuramoto, et al.'s controller portion 6, last memory 9 and optical disk 1ba are not the same as the designator, reference data file and plurality of data files, respectively, defined by Claim 1 in its present form.

Independent Claims 1 and 8 are directed to a content recording apparatus and method, respectively, where the apparatus has a non-volatile storing area (e.g., a non-volatile memory) for storing file information to resume a writing operation from the writing ending location or the vicinity thereof in a situation where a writing operation to the recording medium is abnormally ended due, for example, to an instantaneous power failure, and updates the information stored in the non-volatile area as appropriate. The method of Claim 8 includes steps comparable to the limitations set forth in Claim 1.

The content recording apparatus defined by Claim 1 includes a hard disk video recorder 10 which further includes a hard disk drive 26 having a hard disk 28 integrated therein in which a plurality of data files are created and stored, in advance of a normal recording. More specifically, a plurality of MPEG files and their corresponding INDEX files are successively stored within the hard disk 28. The hard disk video recorder 10 further includes a reference data file or managing file as shown in Figures 3 and 5A through 5D. The managing file is stored within the hard disk 28 and comprises managing data. The managing data is segmented by 24 bytes, each representing six columns, specifically a tag, a starting time, ending time, a file number corresponding to a specific MPEG file, an MPEG off-set corresponding to a writing starting location in the specific MPEG file and an INDEX off-set corresponding to a frame located within the MPEG off-set.

During normal operation, the hard disk drive 26 opens the managing file stored within the hard disk 28 and evaluates the latest 24 bytes of managing data. More specifically, the identifier within the tag column is evaluated. Possible tag identifiers include REC_START, indicating that

a normal recording is started; REC_END, indicating that a normal recording has ended; MPEG_FILE_START, indicating that writing by file stretching has started; MPEG_FILE_END, indicating that writing by file stretching has ended; and INVALID. After evaluating the latest 24 bytes of managing data, the hard disk drive 26 designates a specific MPEG file stored within the hard disk 28 to be written to, based upon the managing data stored within the managing file. During normal recording, in the event that a MPEG file becomes full, the hard disk 26 designates the next successive MPEG file within hard disk 28 to be written to and updates the management data within the management file to indicate that file stretching has occurred, specifically, updating the tag, start time, end time, MPEG file number, MPEG off-set and index off-set, as shown in Figure 5D.

In this respect, there are important distinctions between the reproducing method and apparatus disclosed in the Sakuramoto, et al. published application and the invention defined by independent Claims 1 and 8. First, as recited in Claims 1 and 8, the present invention includes a designator for designating in the order from a reference data file a plurality of data files. More specifically, during operation, the hard disk drive 26 (designator) opens the managing file (reference data file) stored in the hard disk 28. The managing file is readable and writeable by the hard disk drive 26 and includes a plurality of managing data arrays; each array of managing data stored in the managing file comprises 24 bytes. Each 24 bytes of managing data within the managing file is delineated by six columns, each column comprising 4 bytes of data, specifically a TAG column, a START TIME column, an END TIME column, a FILE NUMBER column, a MPEG OFF-SET column and an INDEX OFF-SET COLUMN. The managing file is updated by the hard disk drive 26 during each operation of the reproducing apparatus formed in accordance with the present invention in which the managing data within the managing file is altered. Even more specifically, the managing file (reference data file) designates specific MPEG files (data files) from a plurality of MPEG files stored in advance on the hard disk 28. Each array of managing data within the managing file corresponds to a specific MPEG file. The hard disk 26 (designator) opens the managing file (reference data file) and evaluates the most recent

managing data array which specifies a specific MPEG file (data file). The hard disk 26 (designator) then designates the MPEG file (data file) recognized in the managing file data as the MPEG file to be written to by a data file.

The Sakuramoto, et al. published application does not disclose a designator, reference data file or plurality of data files as defined by Claim 1 of the subject application. Applicant believes that the Examiner is equating Sakuramoto's controller portion 6, last memory 9 and optical disk 1ba to Applicant's designator, reference data file and plurality of data files, respectively, which Applicant respectfully submits is not correct.

The Sakuramoto, et al. published application teaches a controller portion 6 which stores the current recording position on the optical disk by sampling at the timing of the interruption instruction (every one minute) the physical recording location memorized in the work memory 3 into a plurality of memory areas in the last memory 9 (please see Paragraphs [0163] and [0164] of the Sakuramoto, et al. published application). More specifically, the recording positions are written into a last memory 9 which is a non-volatile memory such as an EEPROM or flash memory, as disclosed in Paragraph [0136]. The controller 6 reads the recording position data from the last memory 9 to locate a last position for reproduction/recording on the optical disk.

Contrastingly, Applicant's claimed invention utilizes a plurality of MPEG files (i.e., the "data files" set forth in Claim 1) successively stored in advance of reproduction/recording on a hard disk 28, not a single data file (optical disk) as disclosed in the Sakuramoto, et al. published application. Furthermore, Applicant's claimed invention utilizes a readable/writable managing file (i.e., the "reference data file" set forth in Claim 1) stored within the hard disk 28 comprising managing data that is written/read to the managing file by a hard disk drive 26 (i.e., the "designator" set forth in Claim 1). According to Applicant's claimed invention, the managing file ("reference data file") comprises managing data which references a particular MPEG file ("data file") from the plurality of MPEG files already stored within the hard disk 28. The managing file ("reference data file") as claimed in Applicant's pending application is not a memory such as an EEPROM or flash memory as in the Sakuramoto, et al. published application, as asserted by the Examiner.

With respect to the data files defined by Claim 1 of Applicant's pending application, content data is reproduced/recorded to a plurality of MPEG files ("data files") and successively stored in advance of recording/reproduction in the hard disk 28. During recording/reproduction, the hard disk drive 26 ("designator") selects an MPEG file from the hard disk 28 based upon the most current managing data on the managing fie ("reference data file"). The specific MPEG file referenced in the reference data file is extracted from the hard disk 28 and written to.

Contrastingly, the Sakuramoto, et al. published application teaches writing/reproduction to a single data file, an optical disk. Position data stored within a last memory directs the drive controller to write/reproduce data to a specific physical location on a single medium (optical disk). The Sakuramoto, et al. publication does not teach or suggest forming a plurality of data files as defined by Claim 1 of Applicant's pending application, nor does the Sakuramoto, et al. publication teach writing to a data file on a recording medium. The Sakuramoto, et al. published application only teaches writing/reproducing from a physical location on a single recording medium.

For these reasons, it is respectfully urged that independent apparatus Claim 1 patentably distinguishes over the Sakuramoto, et al. published application and is allowable.

Claims 2-7 directly or indirectly depend from independent Claim 1, and therefore are respectfully urged to patentably distinguish over the Sakuramoto, et al. publication for the same reasons submitted previously with respect to Claim 1 and are allowable.

Independent method Claim 8 corresponds to apparatus Claim 1 and has similar limitations that are found in Claim 1. Therefore, it is respectfully urged that Claim 8 patentably distinguishes over the Sakuramoto, et al. publication for the same reasons submitted with respect to Claim 1 and is allowable.

With respect to independent apparatus Claim 9 of Applicant's pending application, the Examiner contends that the Sakuramoto, et al. publication discloses a content recording apparatus comprising a recorder for recording medium content data formed of a plurality of

partial contents, and the Examiner makes reference to Figure 3 of the Sakuramoto, et al. publication in this regard. More specifically, as shown in Figure 3 of the Sakuramoto, et al. published application, the reproduced information of an optical disc (this is, the disc information, reproduction information, set-up information and reproduction interruption position information) is continuously sampled, preferably in one minute intervals, and successively recorded into memory areas B1 through B6 of a last memory 9. After the last memory area has been filled, that is, B6, the sampling begins to overwrite the reproduced information previously stored in memory area B1. Independent method Claim 14, which parallels independent apparatus Claim 9, has been rejected in view of the Sakuramoto, et al. publication for the same reasons the Examiner asserts for Claim 9.

Applicant has carefully considered the Examiner's helpful comments with respect to Claim 9, and in view of these comments has now amended Claim 9 to change the limitation "a recorder for recording into a recording medium content data" to "a recorder for recording into a recording **data file**" to specify that the recording medium is a data file, such as an MPEG file. It is respectfully urged that this amendment better distinguishes the recording medium (optical disk) disclosed in the Sakuramoto, et al. publication from the data file (MPEG file) now set forth in Applicant's Claim 9. Additionally, Applicant has now amended Claim 9 to change the limitation "a creator for creating index data" to "a creator for creating **within a reference data file** index data" to further distinguish Applicant's claimed invention from the Sakuramoto, et al. publication, these differences having been described previously with respect to Claim 1. Accordingly, it is respectfully urged that Claim 9, as now more clearly and more specifically amended, patentably distinguishes over the Sakuramoto, et al. published application and is allowable.

Claims 10-13 directly or indirectly depend from amended independent Claim 9, and therefore are respectfully urged to patentably distinguish over the Sakuramoto, et al. publication for the same reasons submitted with respect to Claim 9 and are allowable.

Independent method Claim 14, which recites method steps which correspond closely to the comparable language recited in independent apparatus Claim 9, has been amended in the

same manner as Claim 14 was amended, that is, to add the limitations "data file" and "reference data file", to more clearly and specifically distinguish the claimed method over that which is disclosed in the Sakuramoto, et al. publication. Accordingly, it is respectfully urged that Claim 14, as now amended, patentably distinguishes over the Sakuramoto, et al. publication for the same reasons discussed previously with respect to Claim 9 and is allowable.

With respect to independent apparatus Claim 15 and dependent Claim 16 of Applicant's pending application, the Examiner contends that Paragraphs [0094] and [0113] of the Sakuramoto, et al. published application disclose a recording state information holder which holds state information that represents two states of a recording state and a record suspended state and that, when the recording of the content data is started in response to a record starting instruction, the recording state is established, and that when the recording of the content data is suspended in response to a record suspending instruction, the record suspending state is established. The rejection of Claims 15 and 16 in view of the Sakuramoto, et al. published application is respectfully traversed.

Applicant's content recording apparatus as defined by Claim 15 includes a recording state information holder or managing file, more specifically the TAG column within the managing file which comprises a plurality of identifiers, including REC_START, REC_END, etc., which indicate the start of a normal recording state, as input from the user, and the end of the normal recording state, as input from the user. Even more specifically, the hard disk drive 26 reads the TAG information within the management file to determine a recording state.

Contrastingly, as specified in Paragraph [0094] of the Sakuramoto, et al. published application, when recording has been suspended, the known position of recording/reproducing stored within a work memory 3 is stored into a last memory 9. More specifically, when the interruption signal is terminated by means of suspension of reproducing/recording, the last known position on the optical disk is stored in the last memory. As with the regular sampling disclosed in the Sakuramoto, et al. published application, the last known position on the optical disk is continuously sampled into a last memory 9 until the interruption signal which provides

the means for the sampling is terminated. The most recent position data is successively written into the memory areas of the last memory with the most recent position having the highest assigned position within the last memory.

The Sakuramoto, et al. published application does not teach or suggest to read a recording state from a recording state holder, nor does it teach or suggest recording a current or past recording state. The device disclosed in the Sakuramoto, et al. published application simply stores the most recent position data known at the time of the interruption signal. When the recording/reproducing operation ends by either a suspension by the user or a loss of power, the timer signal is terminated, ending the storing of the position data into the last memory. After recording/reproduction is resumed, the timer signal is once again initiated, and the last known position in the last memory is recalled based upon an incremented variable "management no. 0"; that is, the memory area having the highest consecutive "management no. 0" is recalled, the memory area holding the most recent position data on the optical disc. Such structure and operation of the Sakuramoto, et al. publication are thus different from what is specifically set forth in Claim 15 of the subject application.

Nevertheless, in order to clarify the differences between Applicant's content recording apparatus and the device disclosed in the Sakuramoto, et al. application, Applicant has amended Claim 15 to change the limitation "a recording state information holder" to "a recording state information **file**." The Sakuramoto, et al. published application does not teach storing any position data into a specific software based file but rather only teaches to store position data into physical memory areas within a last memory or work memory (both non-volatile memories).

Accordingly, it is respectfully urged that independent Claim 15, as now more specifically amended, patentably distinguishes over the Sakuramoto, et al. published application and is allowable.

Claim 16, which depends from Claim 15, is respectfully urged to patentably distinguish over the Sakuramoto, et al. publication for the same reasons submitted previously with respect to Claim 15 and is allowable.

In view of the foregoing amendments and remarks, entry of the amendments to Claims 9, 14 and 15 and favorable reconsideration of these claims, favorable reconsideration of Claims 1-8, 10-13 and 16 and allowance of the application with Claims 1-16 are respectfully solicited.

Respectfully submitted,

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